

FIGURE 1

Double Stranded or Single Stranded DNA or RNA

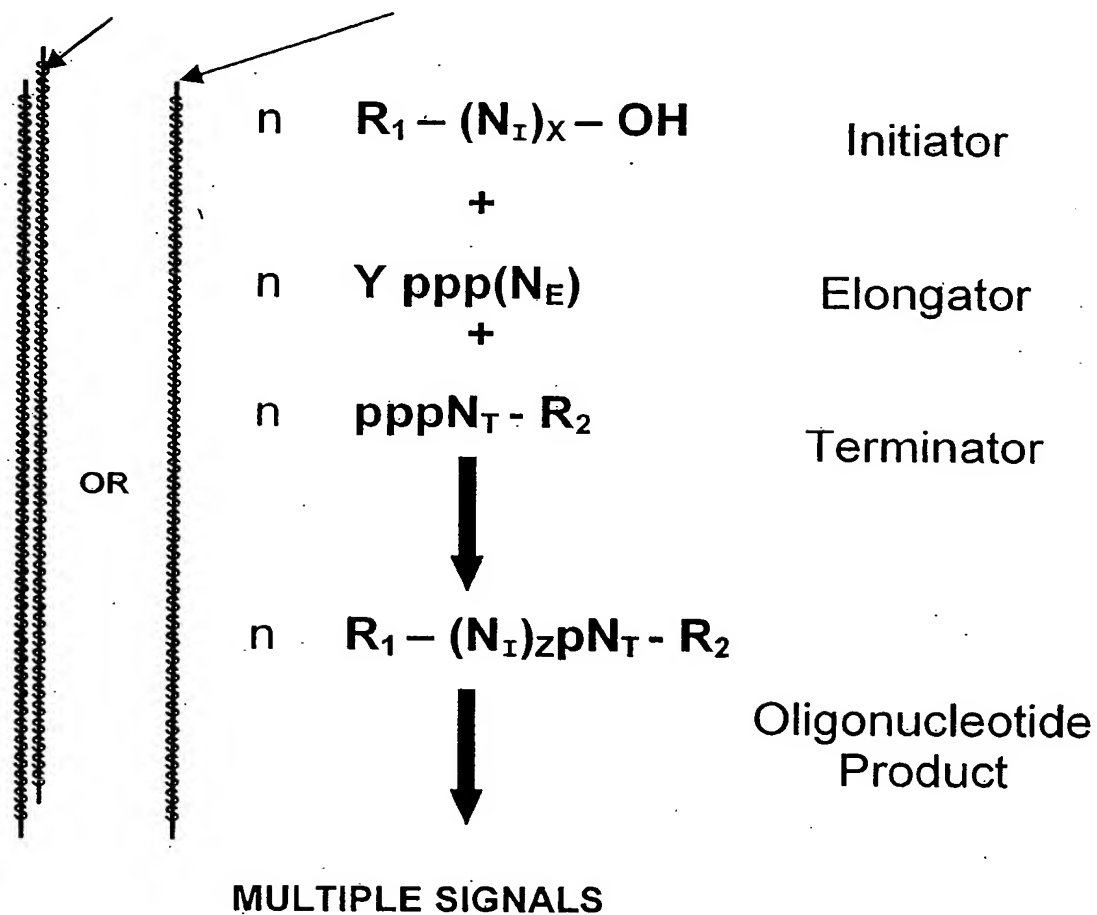


FIGURE 2

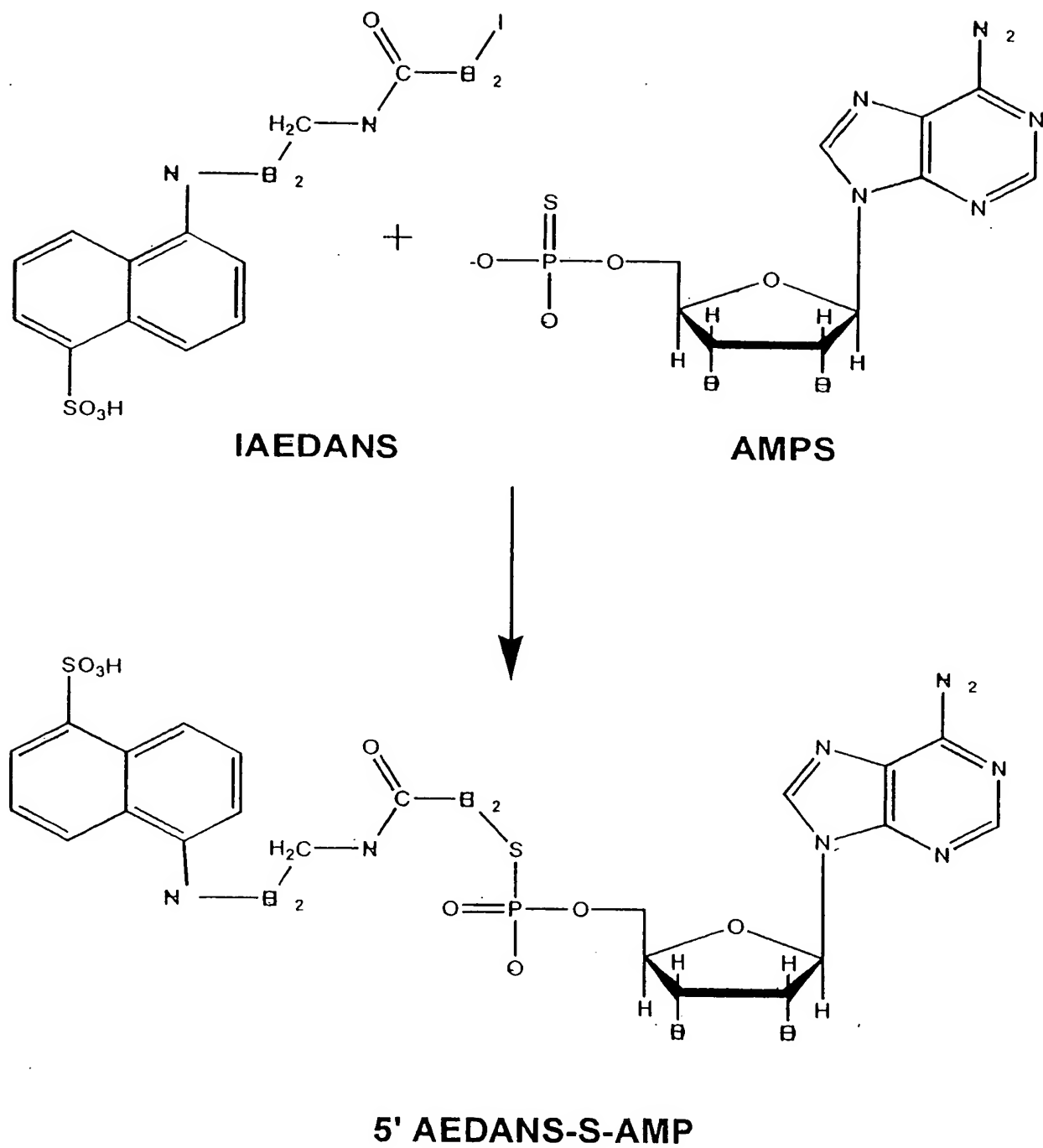
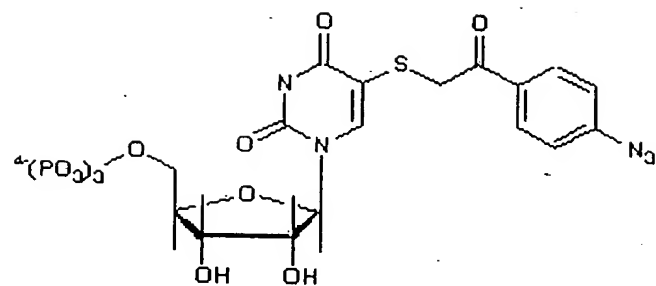
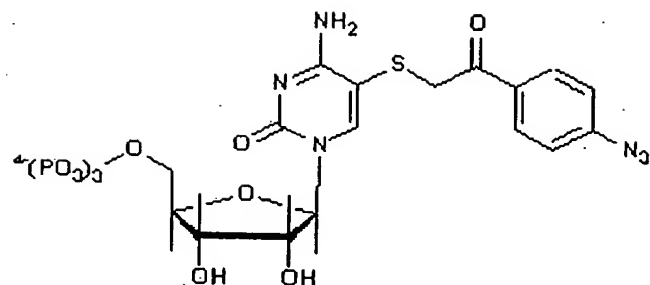


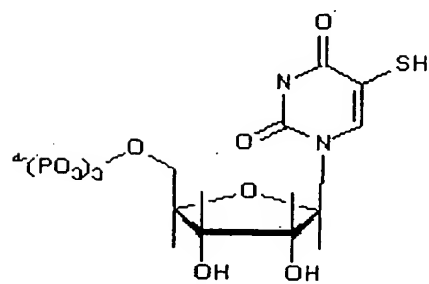
FIGURE 3



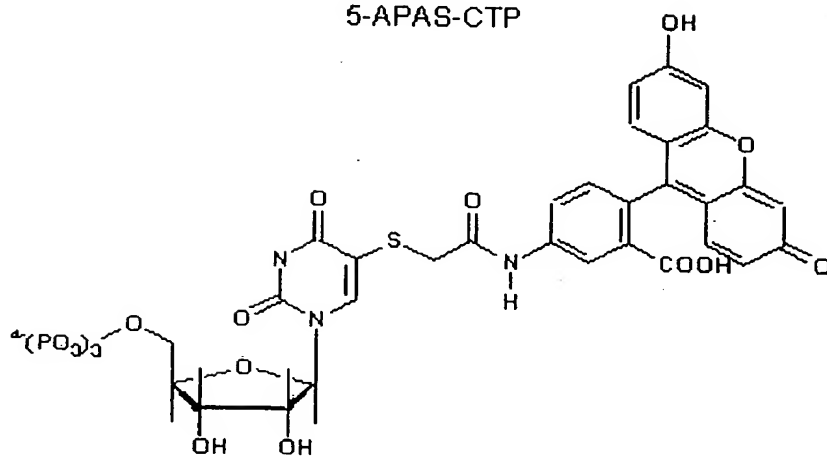
5-APAS-UTP



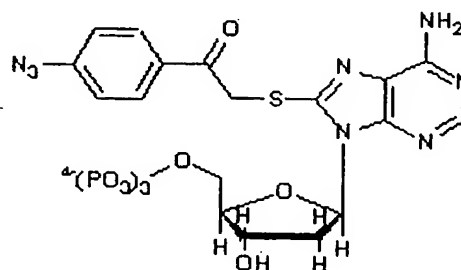
5-APAS-CTP



5-SH-UTP

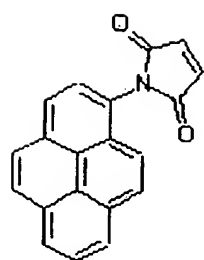


5-SF-UTP

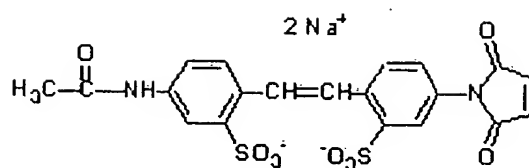


8-APAS-ATP

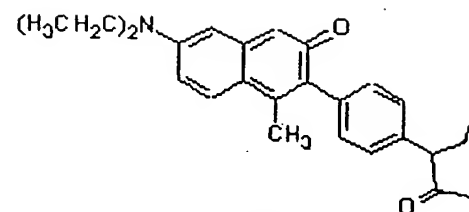
FIGURE 4



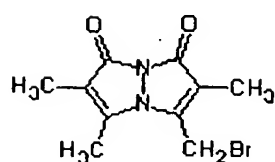
pyrene



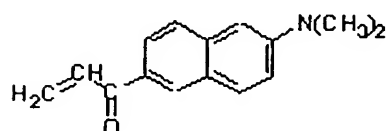
stilbene



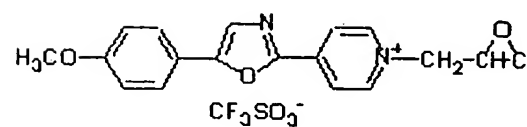
coumarine



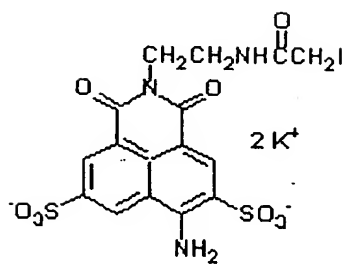
bimeane



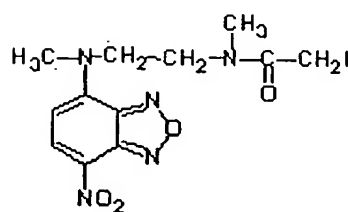
naphthalene



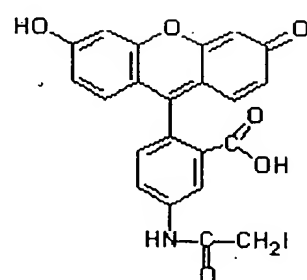
pyridyloxazole



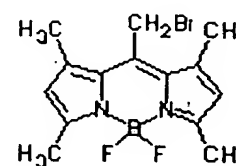
naphthalimide



NBD



fluorescein



BODIPY<sup>TM</sup>

FIGURE 5

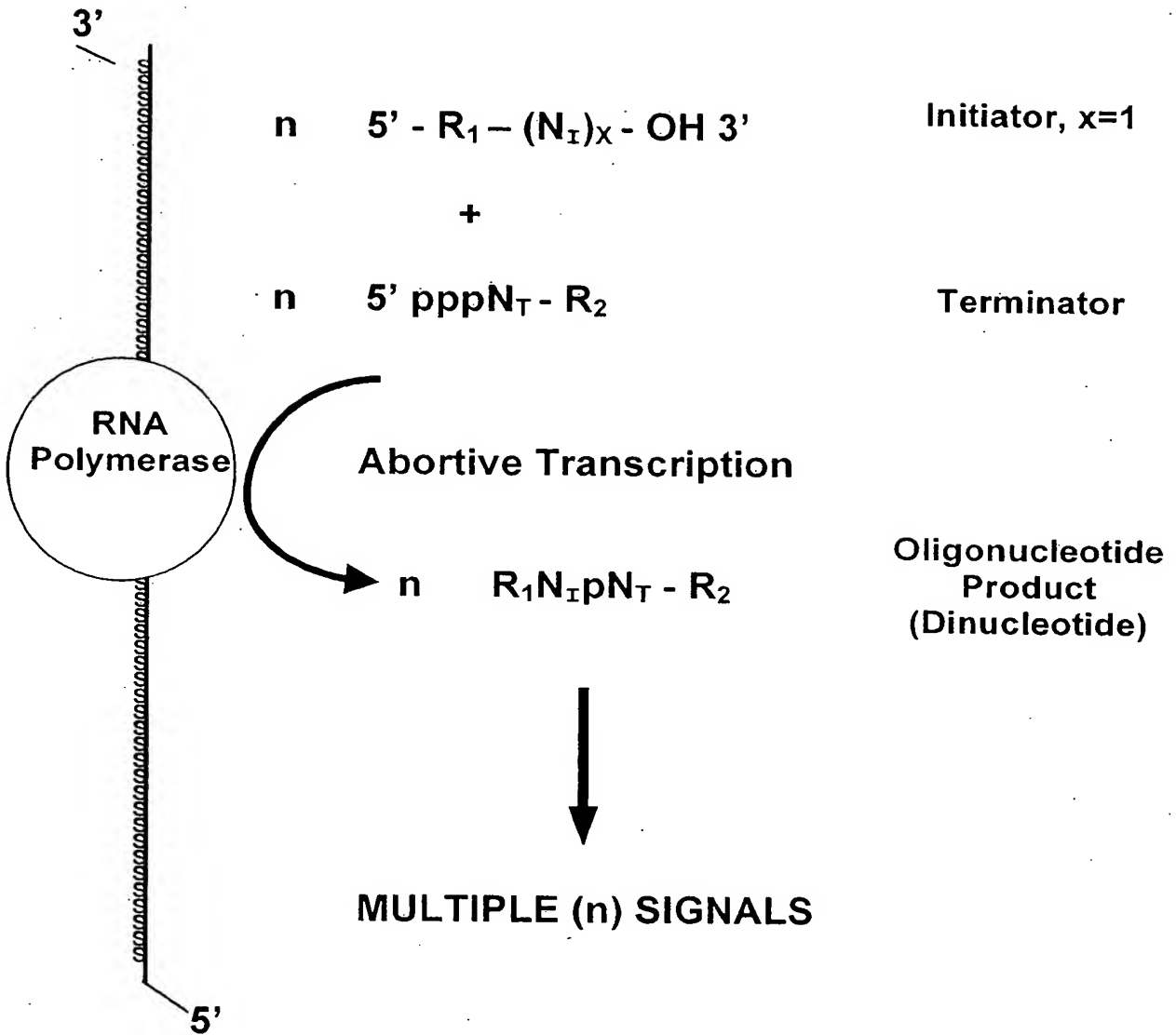


FIGURE 6

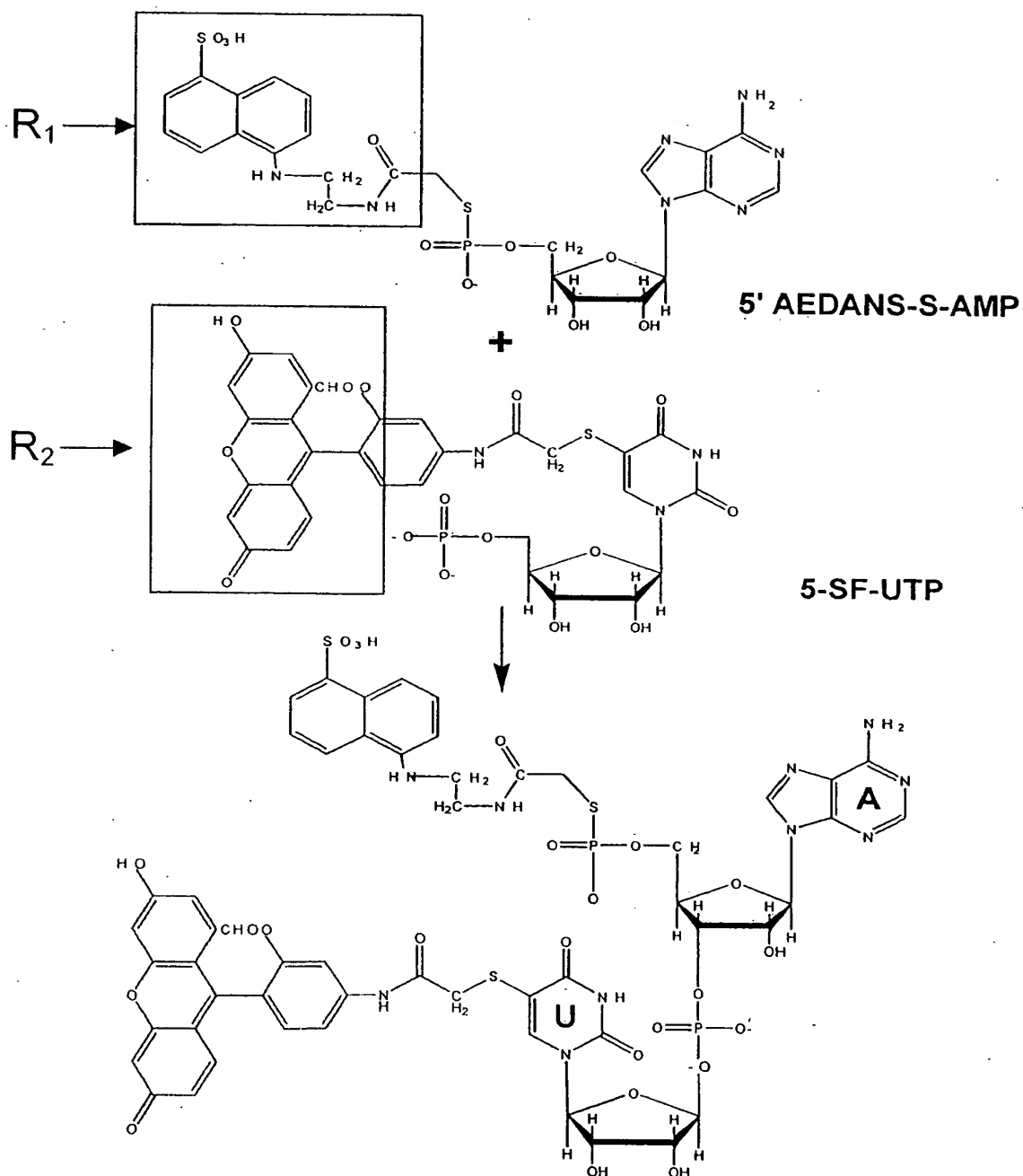


FIGURE 7

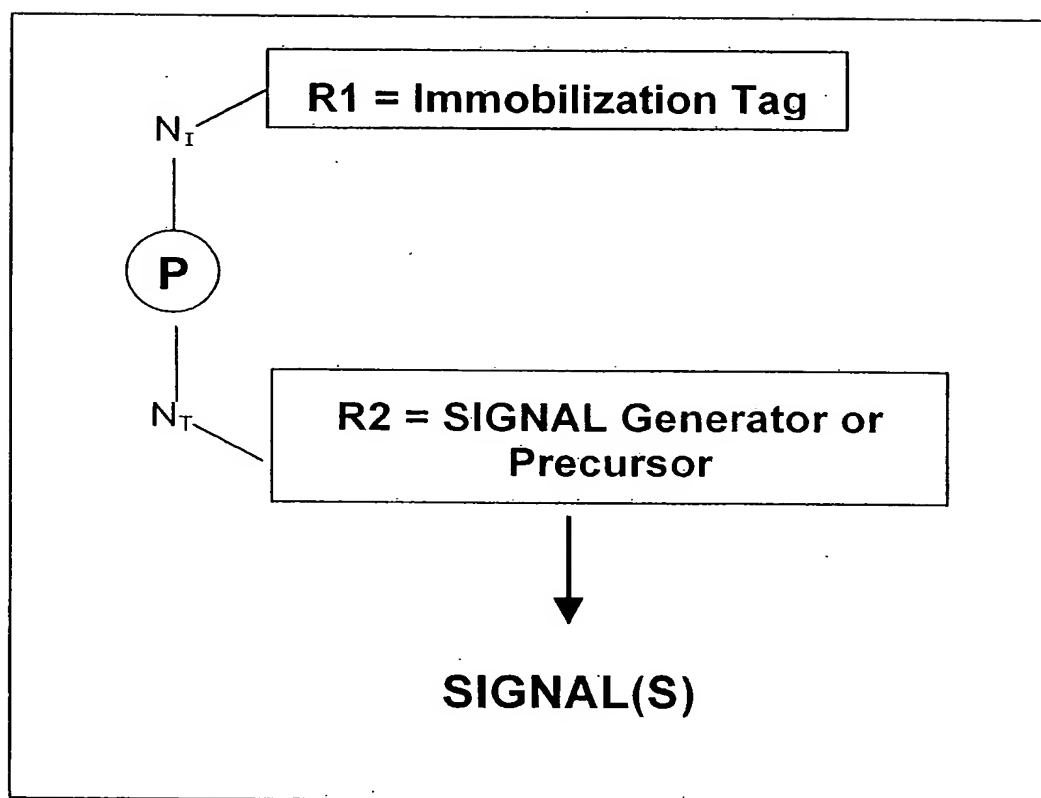


FIGURE 8



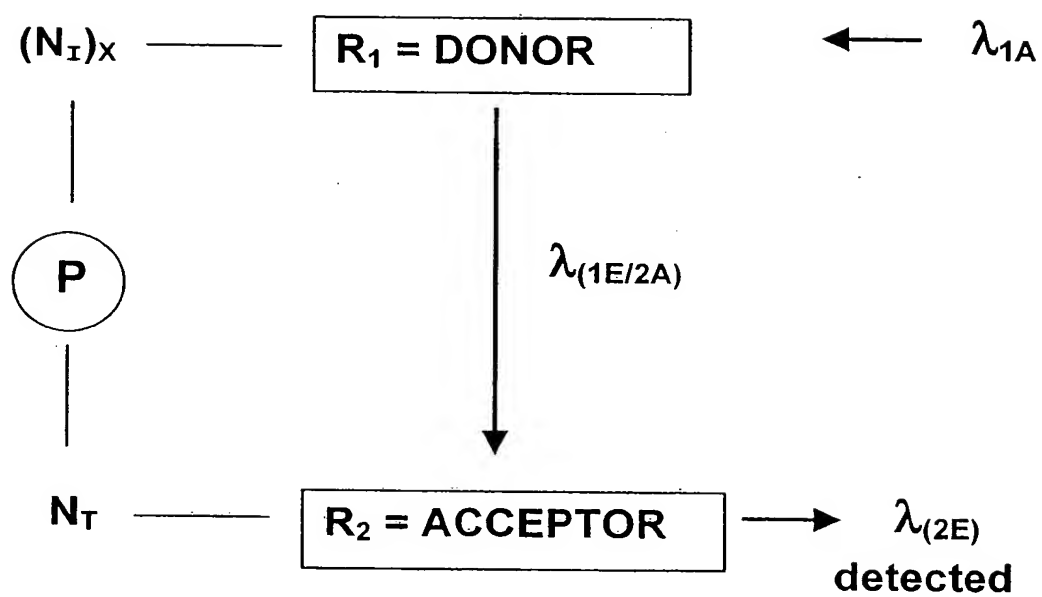


FIGURE 9

$n \quad R_1N_1pN_2R_2-OH$

+

$n \quad pppN_3R_3$

where  $N_3$  is a terminator

$n \quad R_1N_1pN_2R_2pN_3R_3$

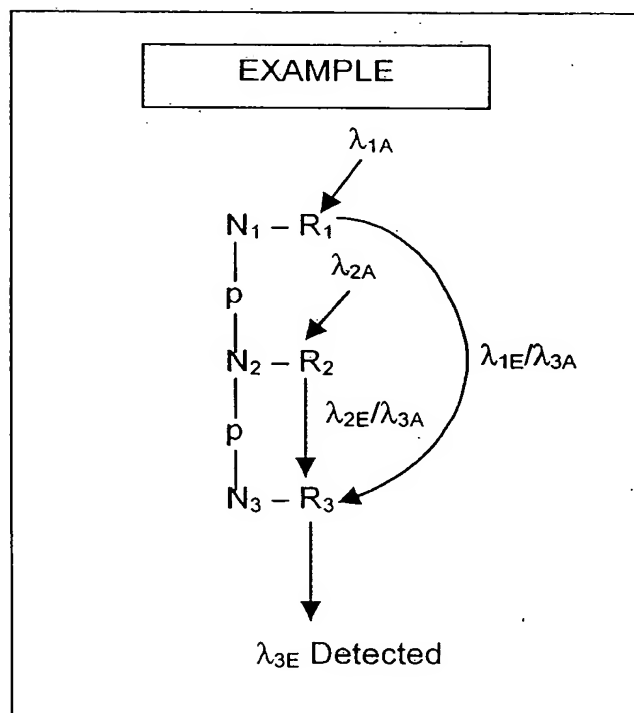


FIGURE 10

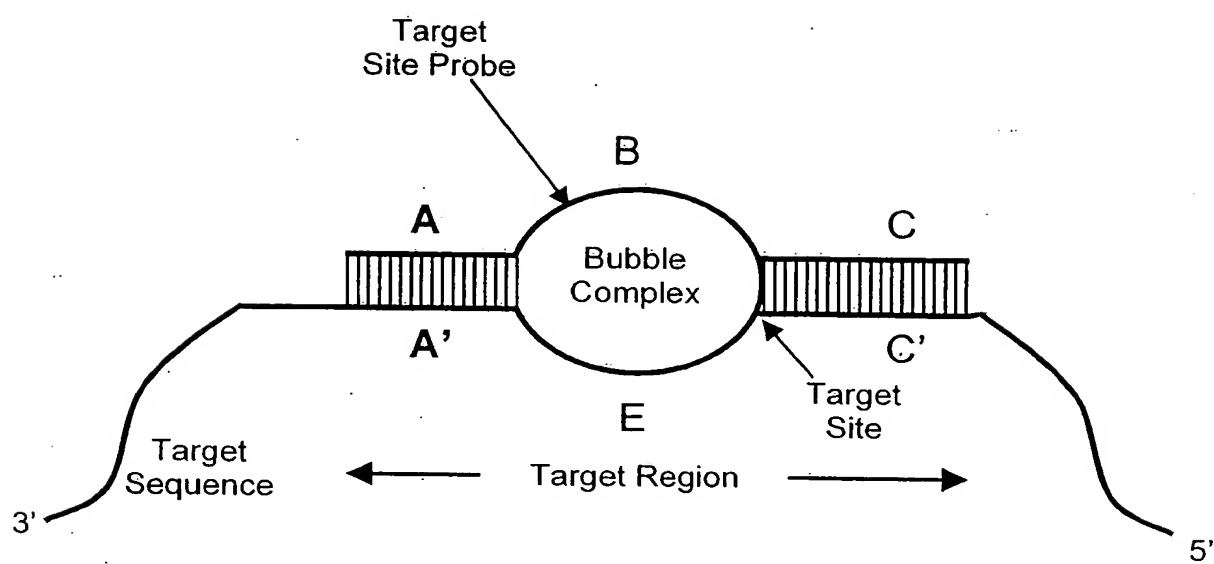


FIGURE 11

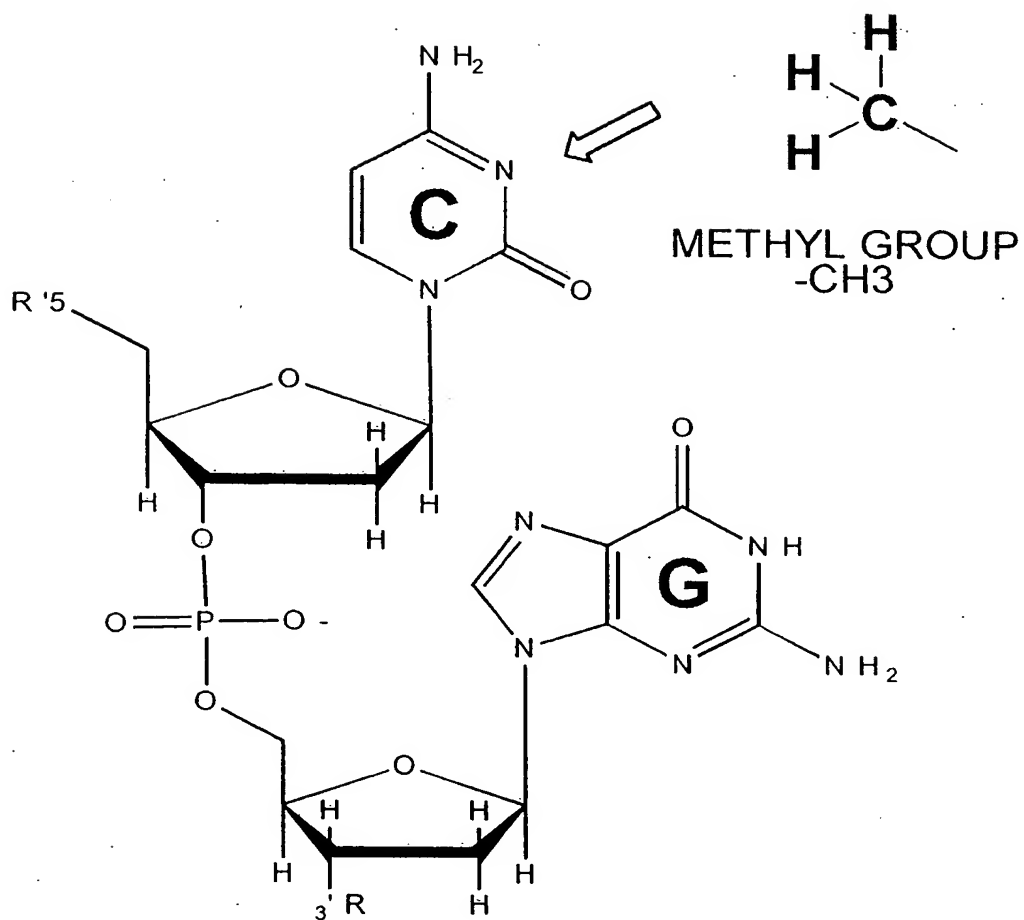


FIGURE 12

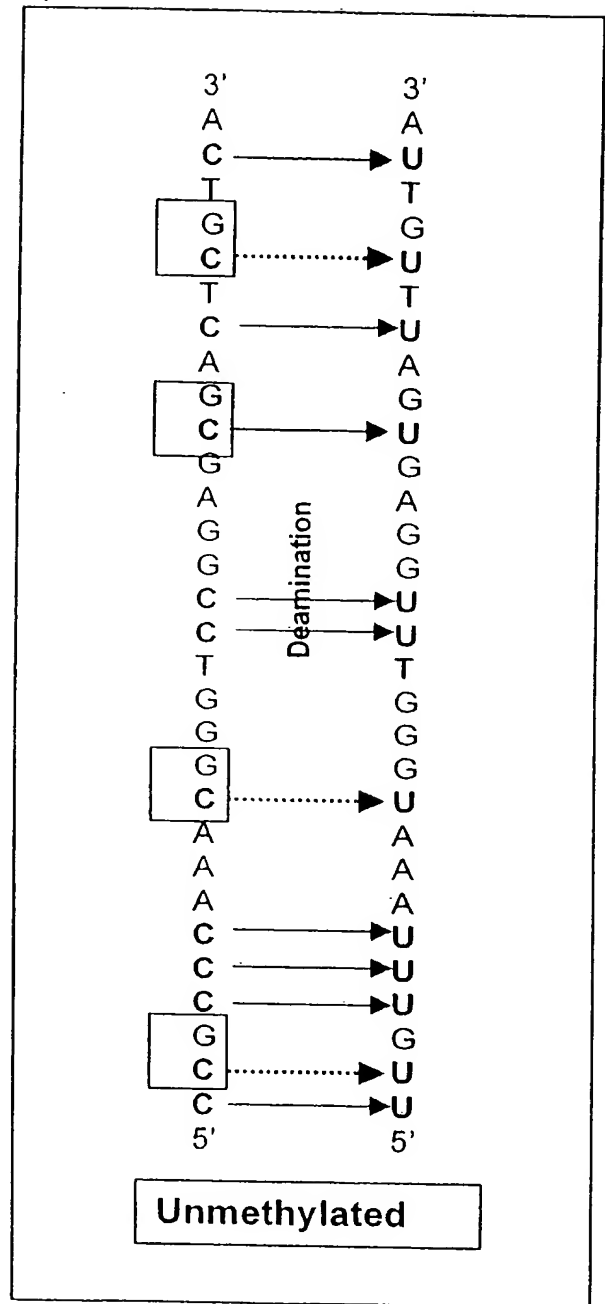
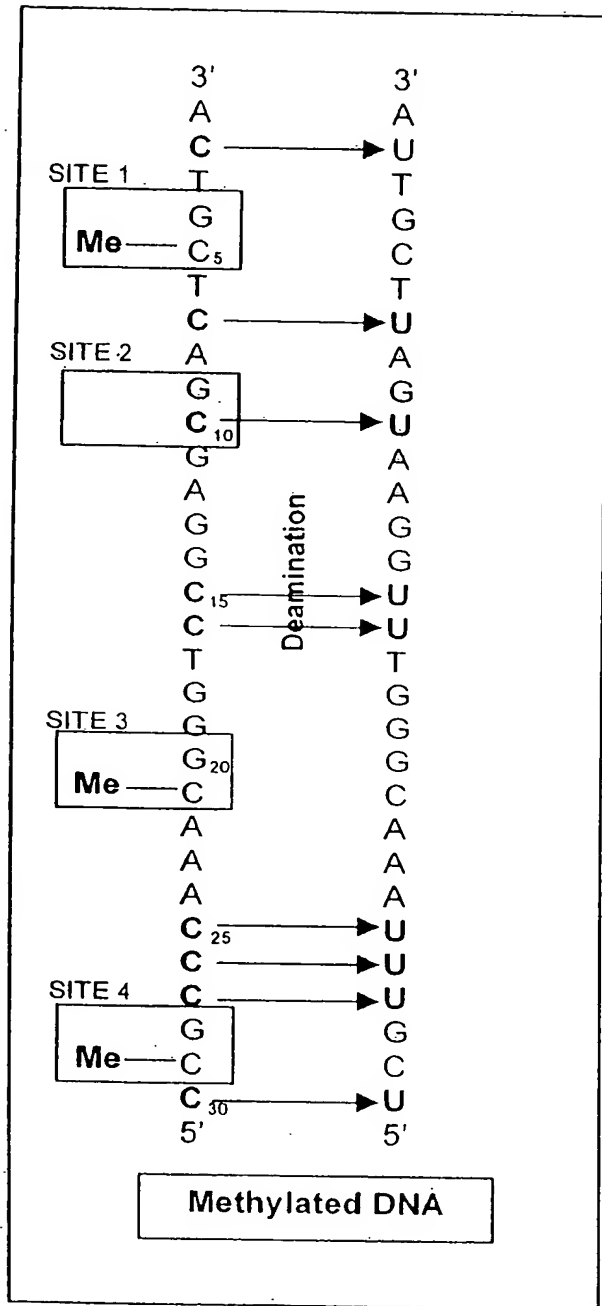


FIGURE 13

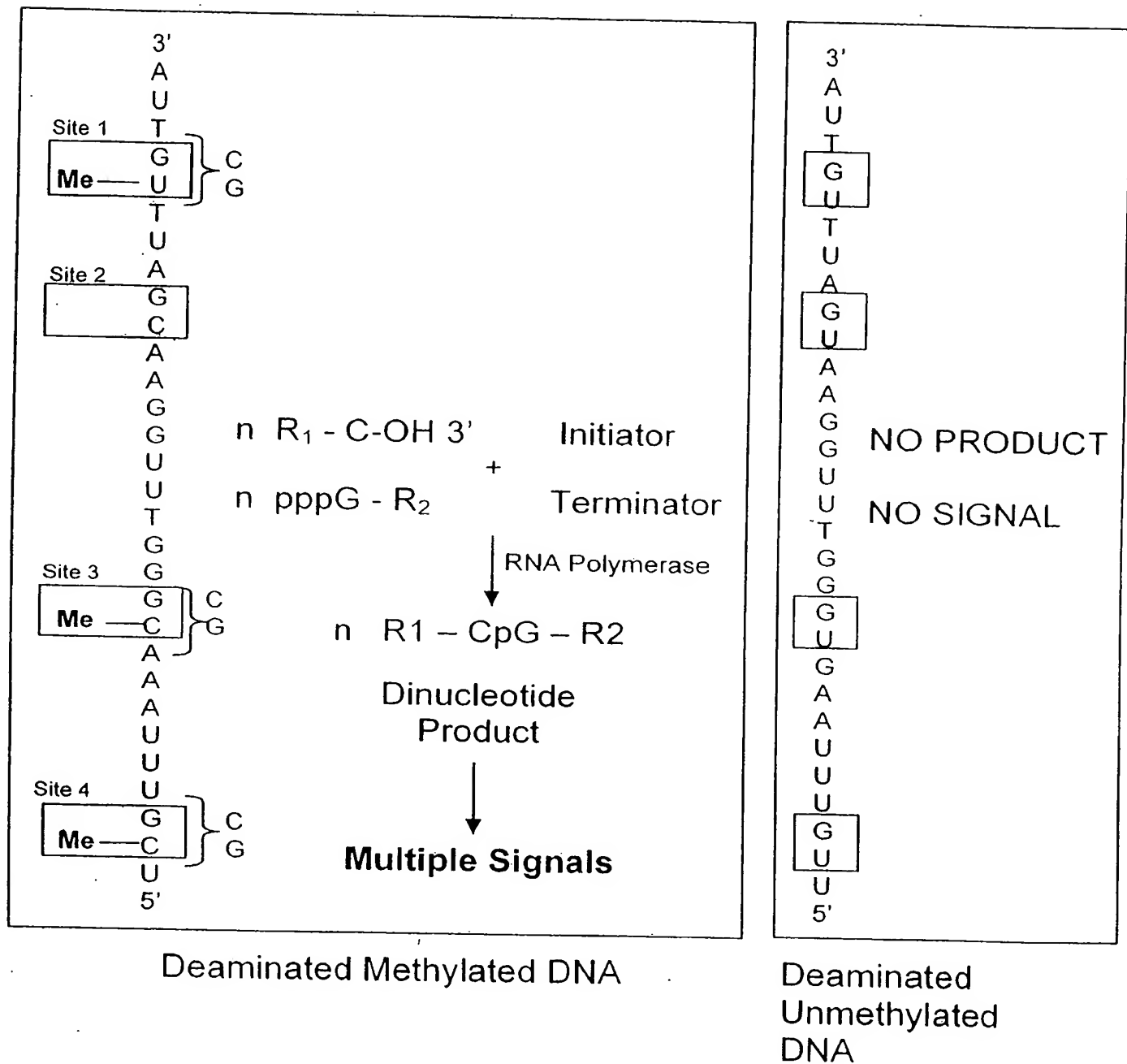
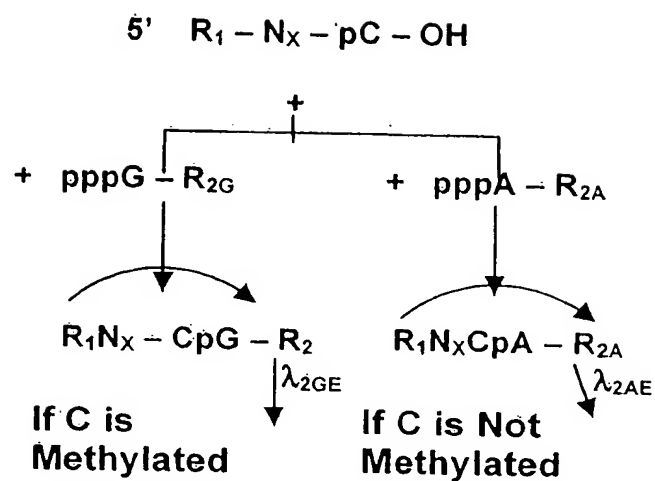
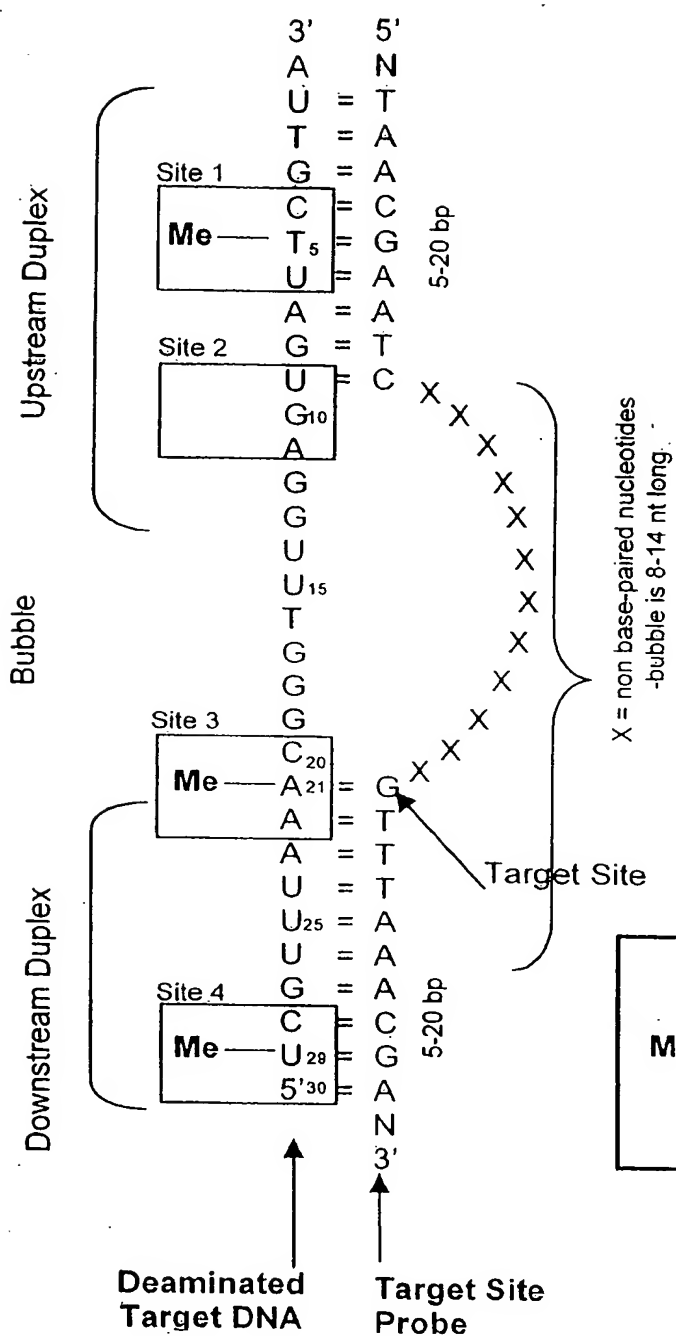


FIGURE 14



- M = 1 If both copies are 100% methylated: Only λ<sub>2GE</sub> detected
- M = 0.5 If 1 copy is methylated: Both λ<sub>2GE</sub> and λ<sub>2AE</sub> detected
- M = 0 If both copies unmethylated: only λ<sub>2AE</sub> detected

$$M = \text{Methylation Index} = \frac{E\lambda_{2GE}}{E\lambda_{2GE} + E\lambda_{2GA}}$$

FIGURE 15

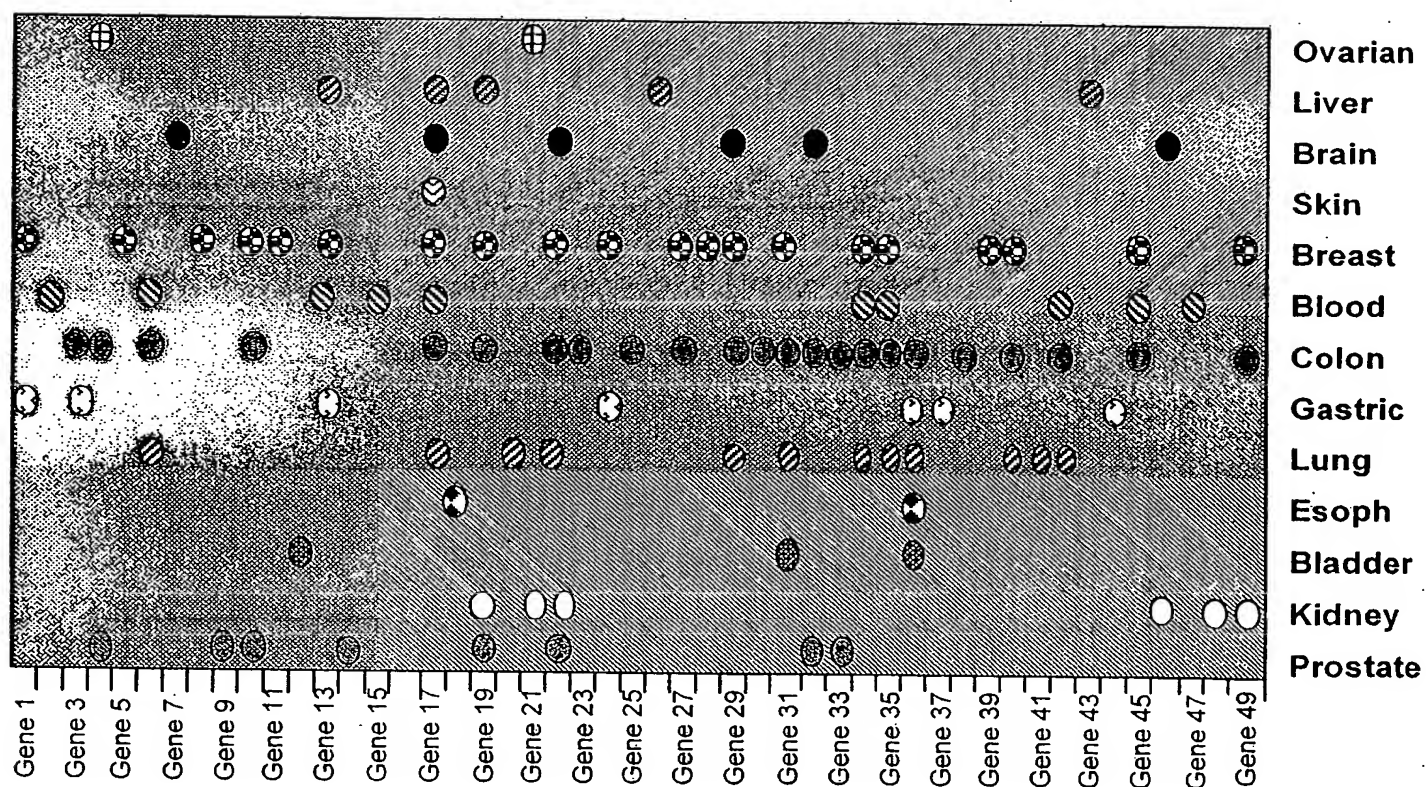


FIGURE 16



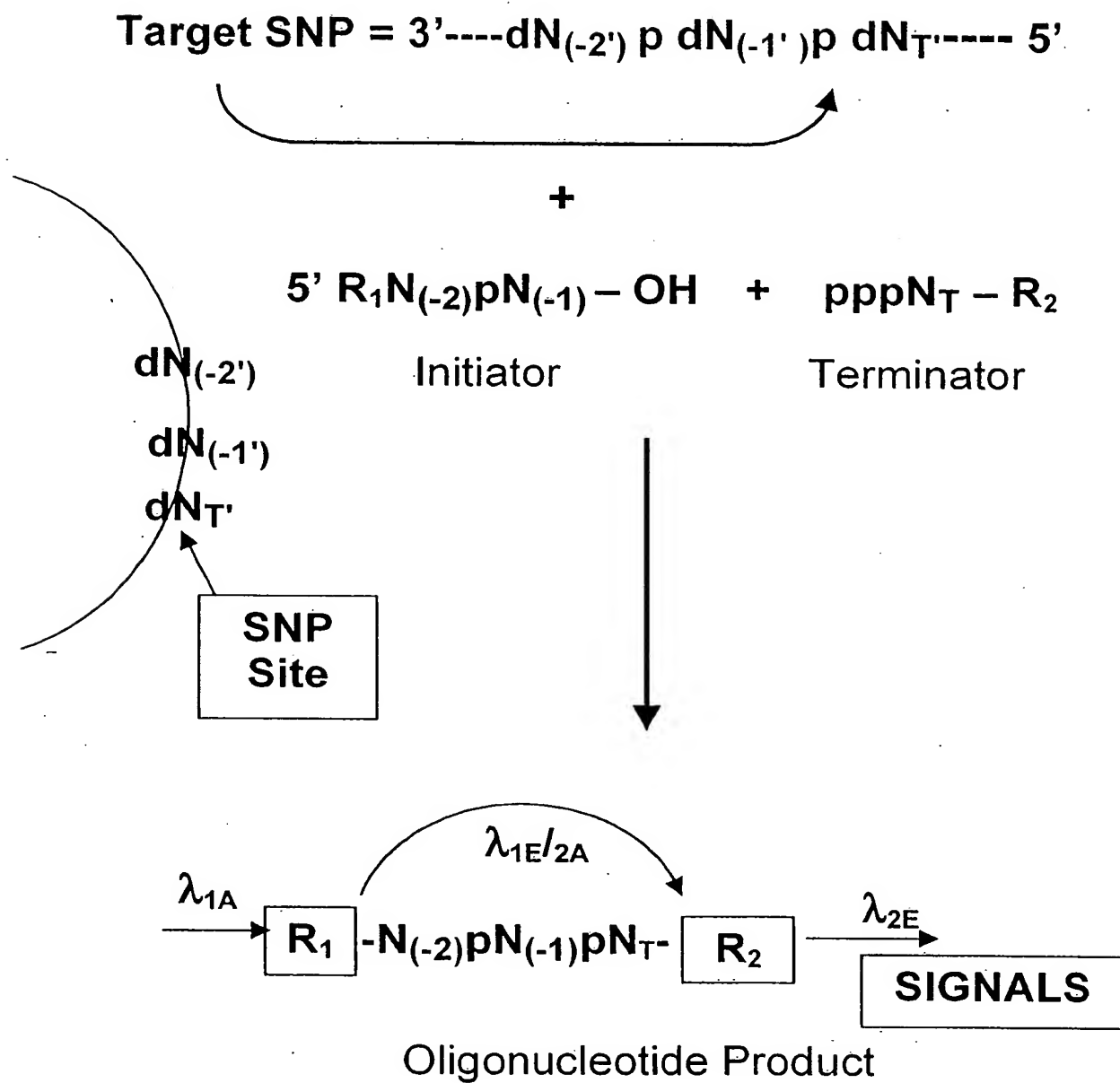


FIGURE 17

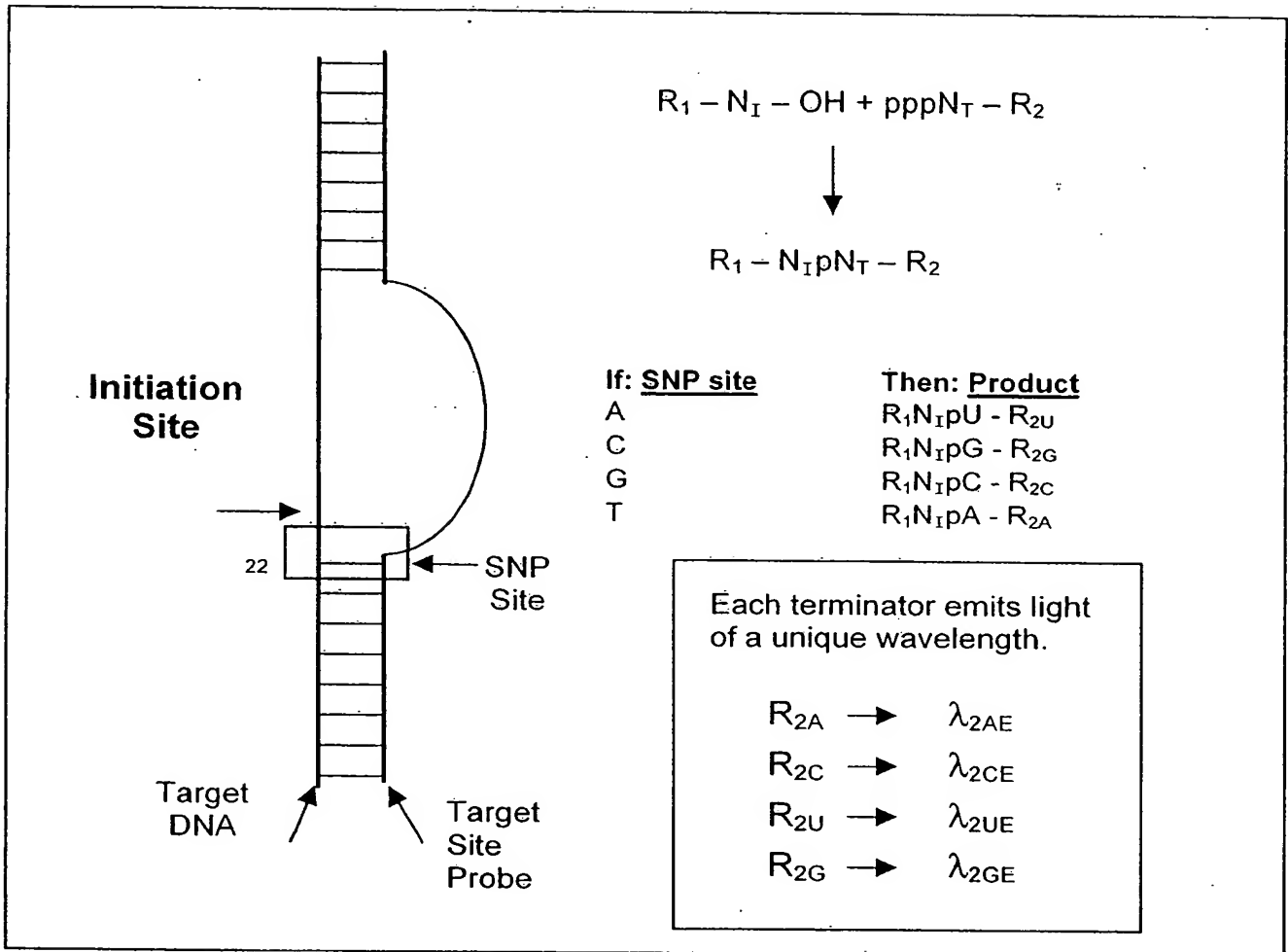


FIGURE 18

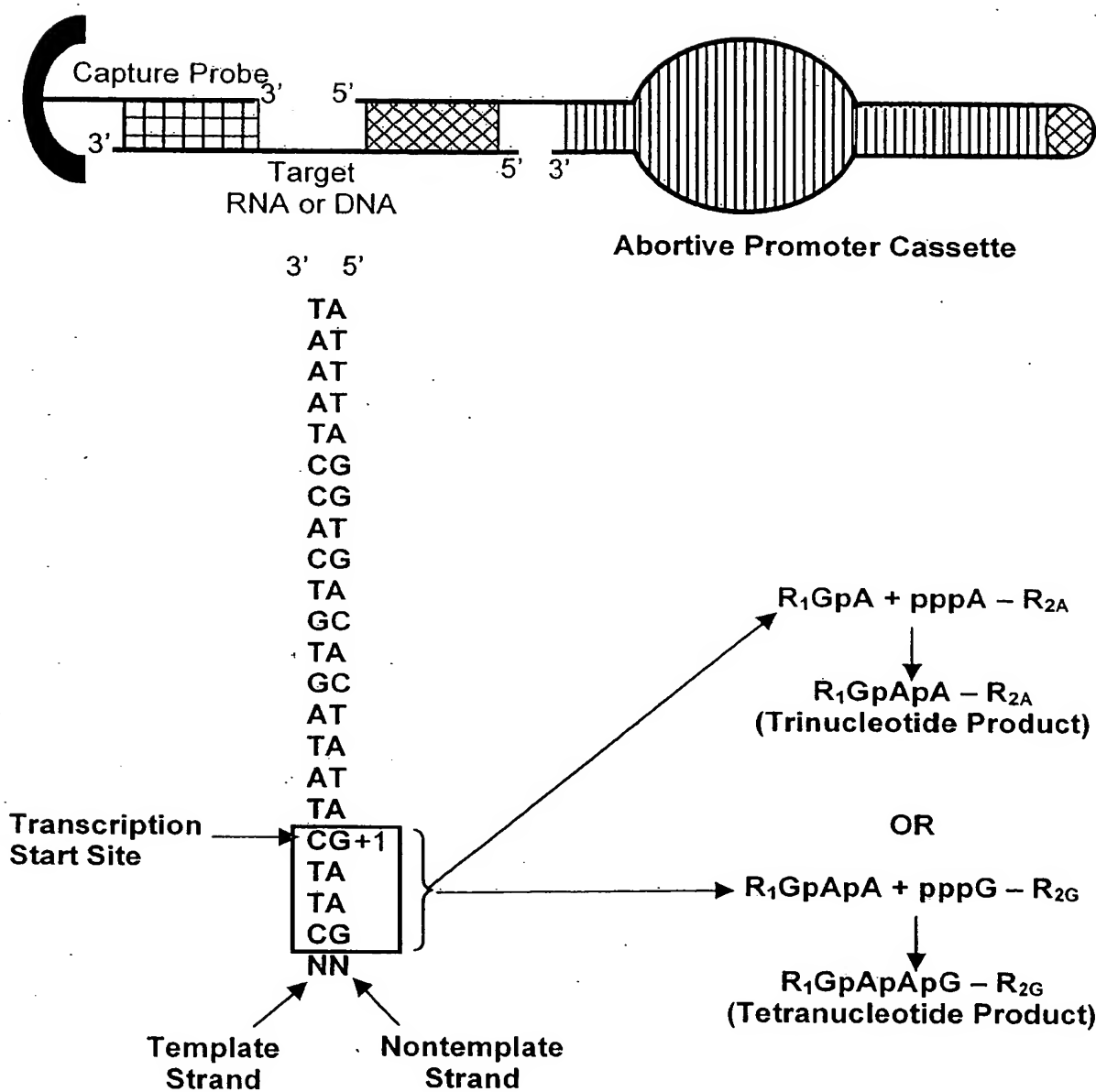


FIGURE 19

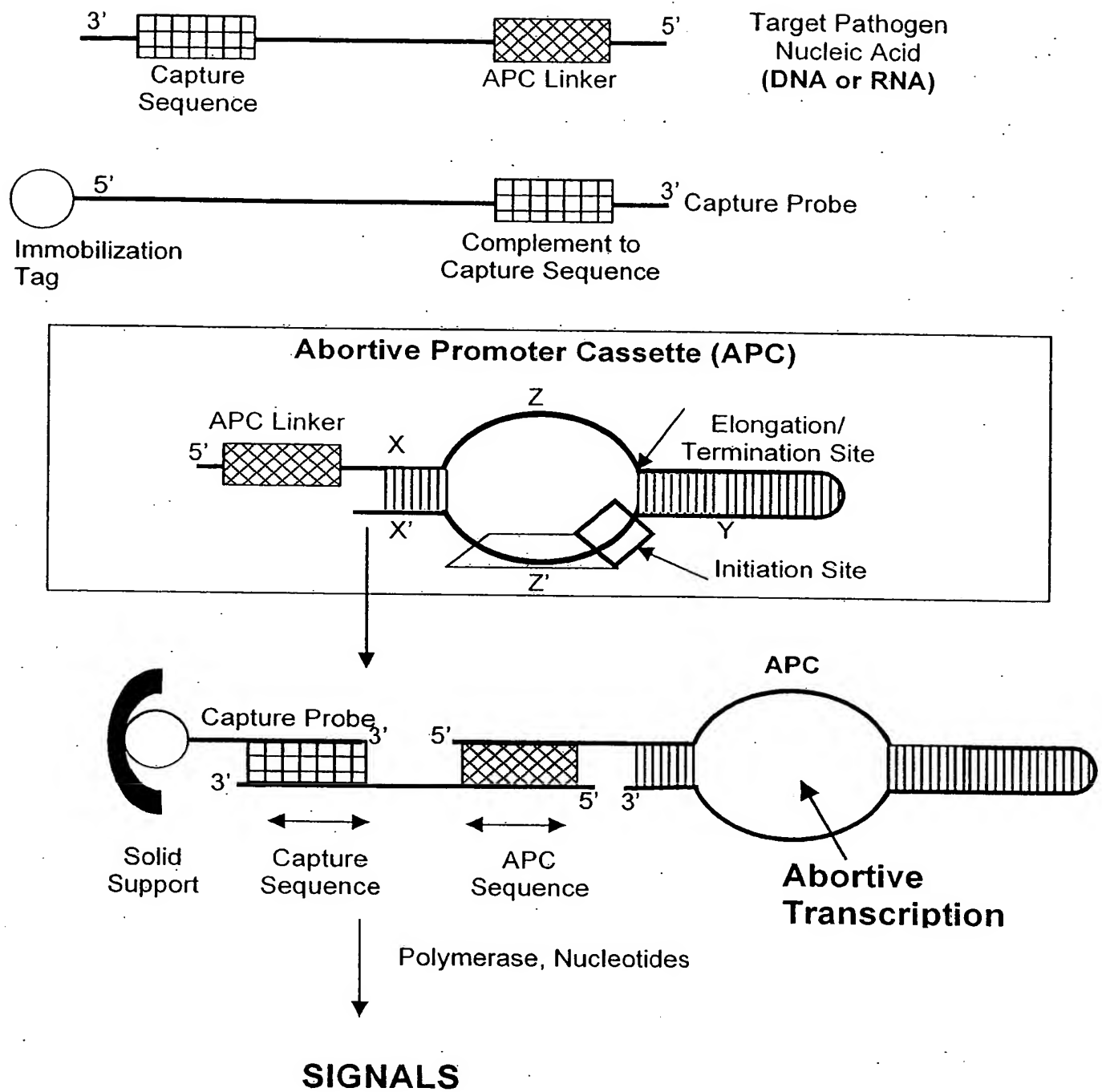


FIGURE 20

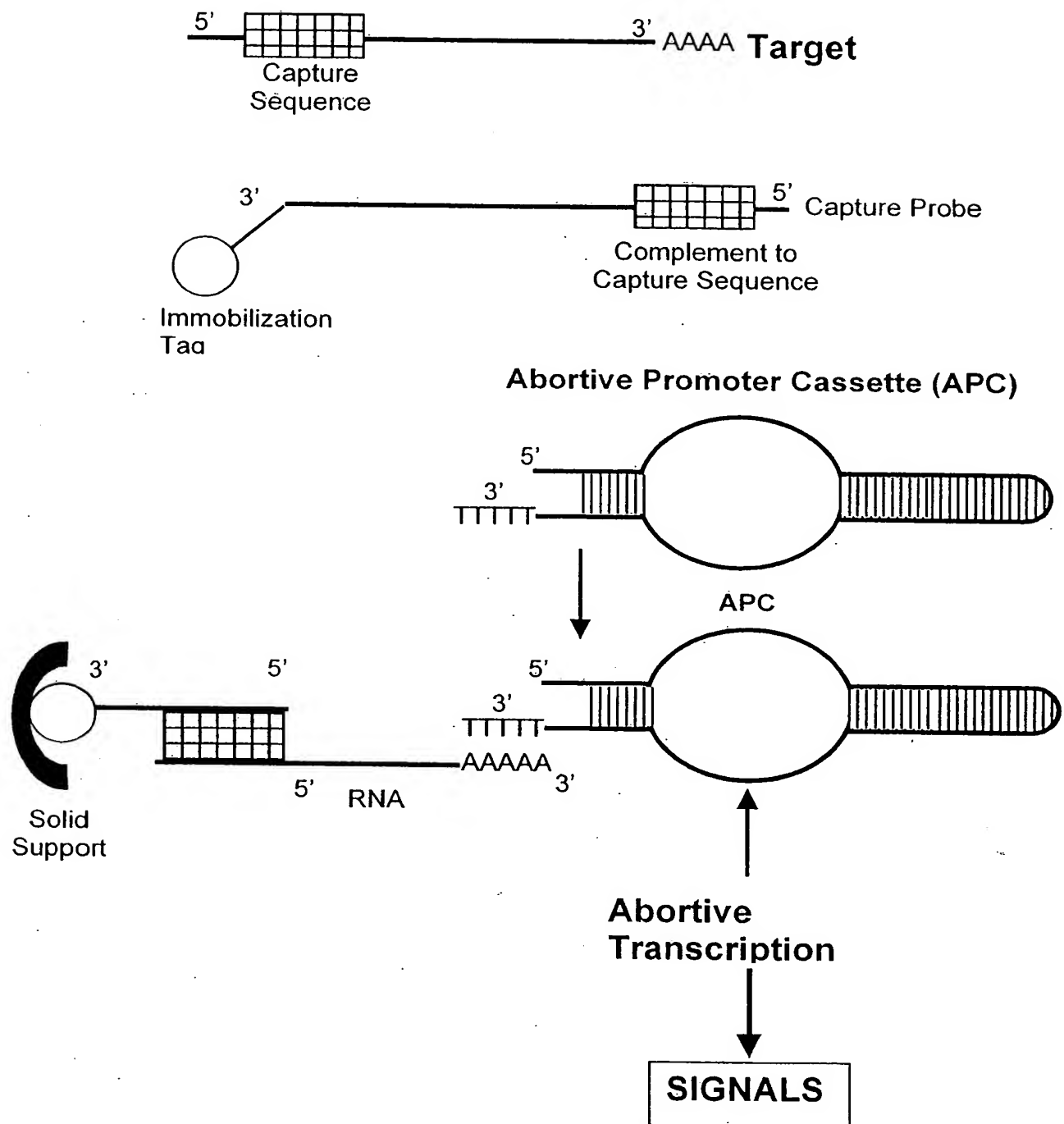


FIGURE 21

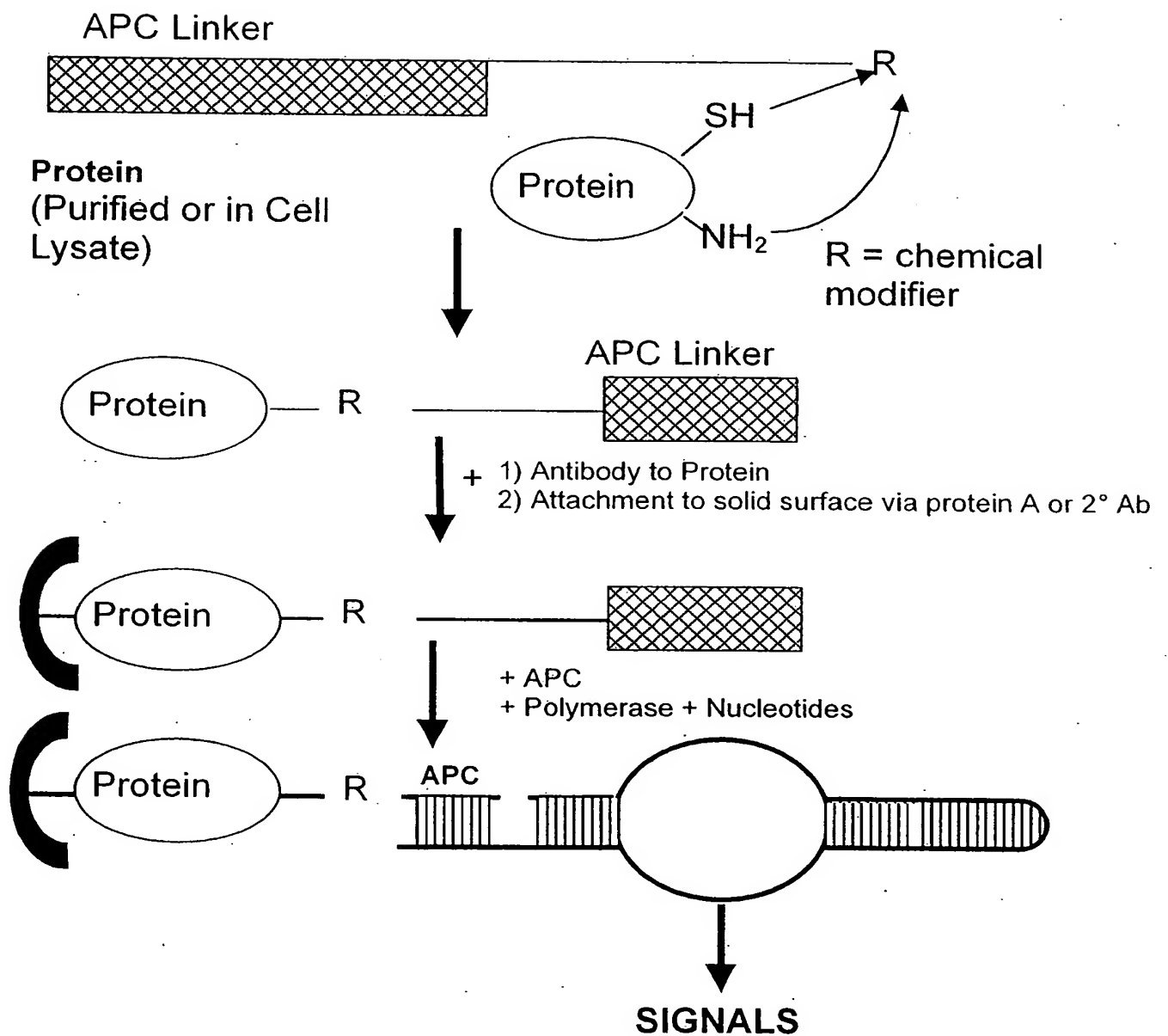


FIGURE 22

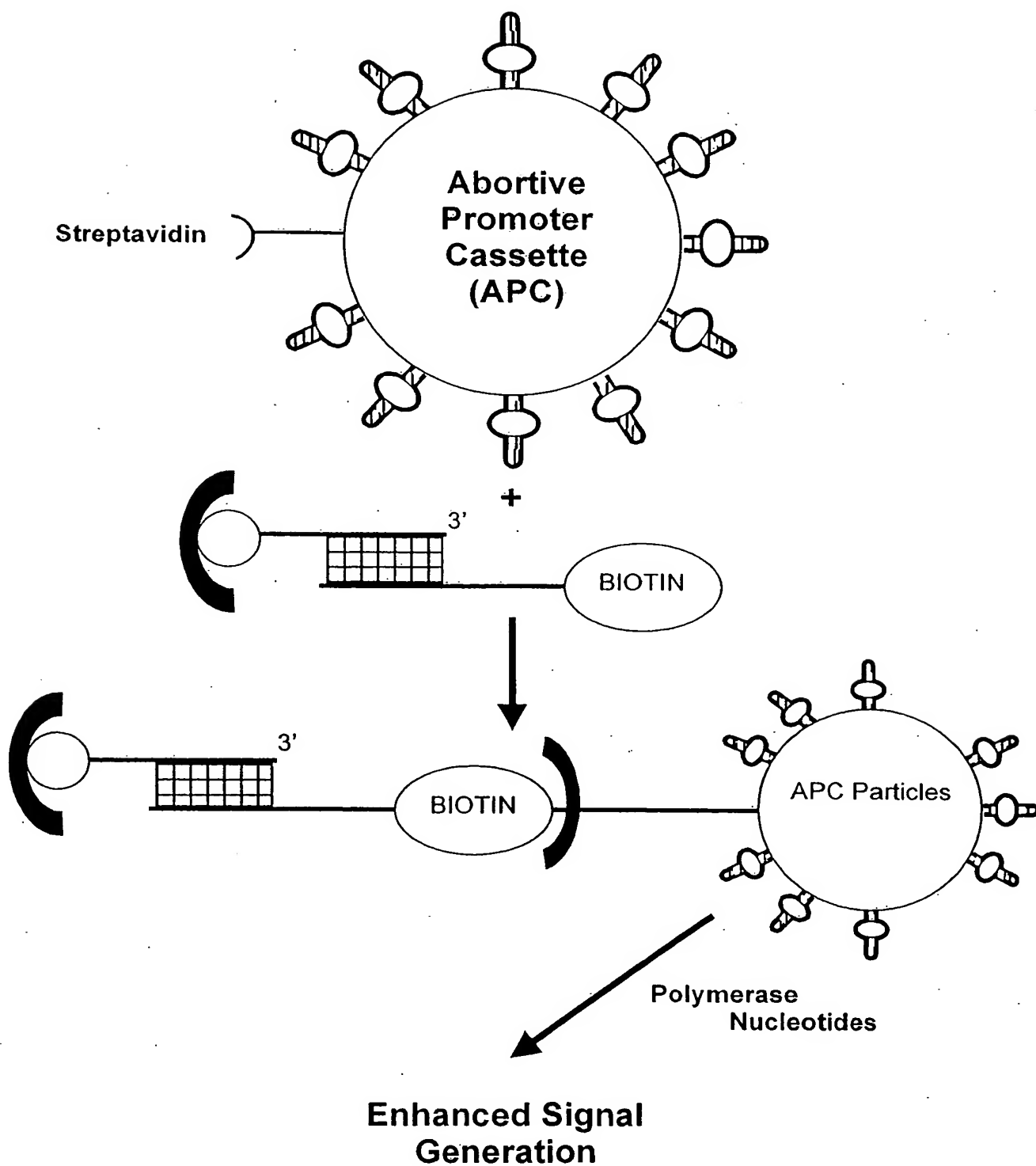


FIGURE 23

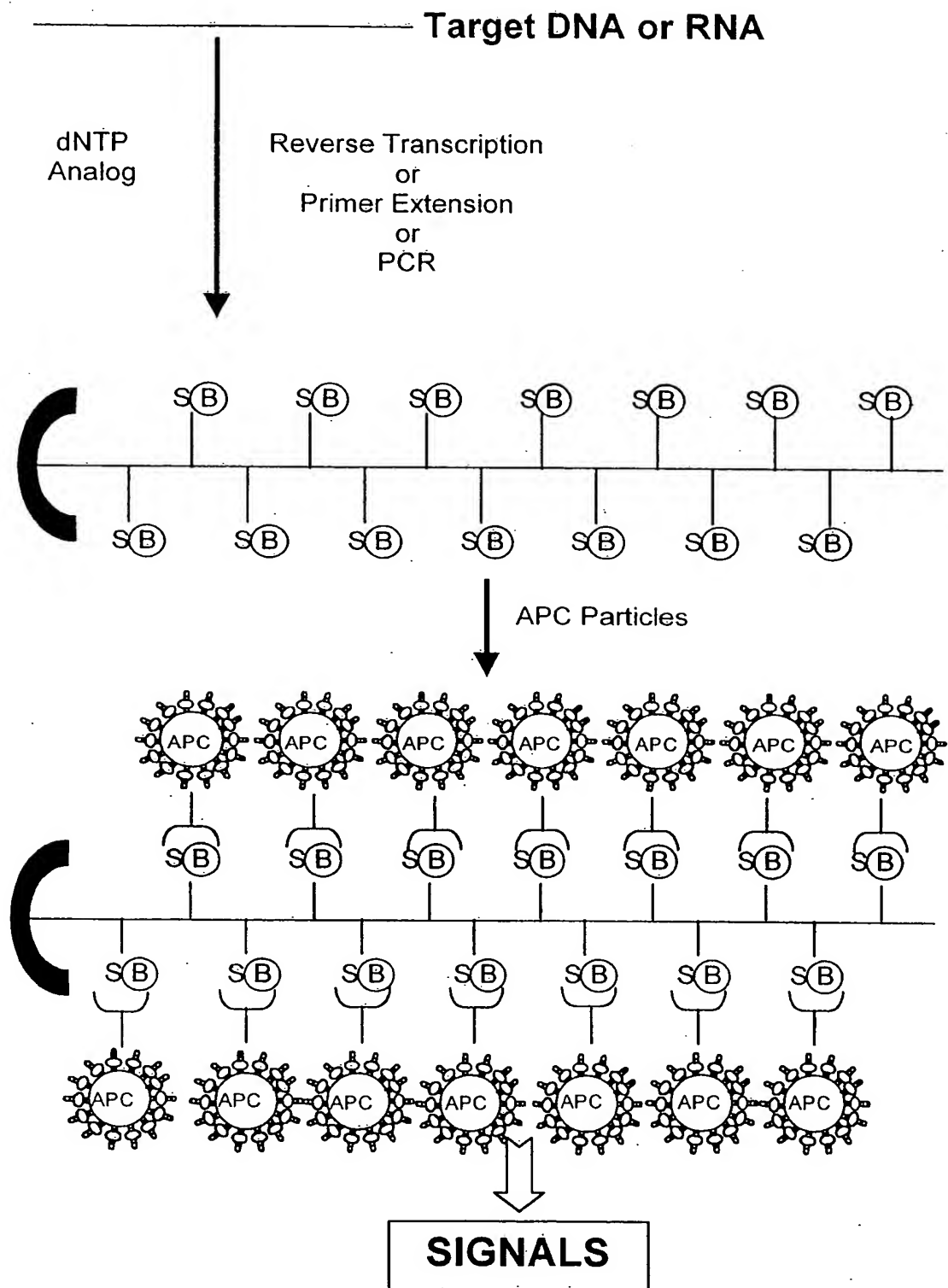


FIGURE 24



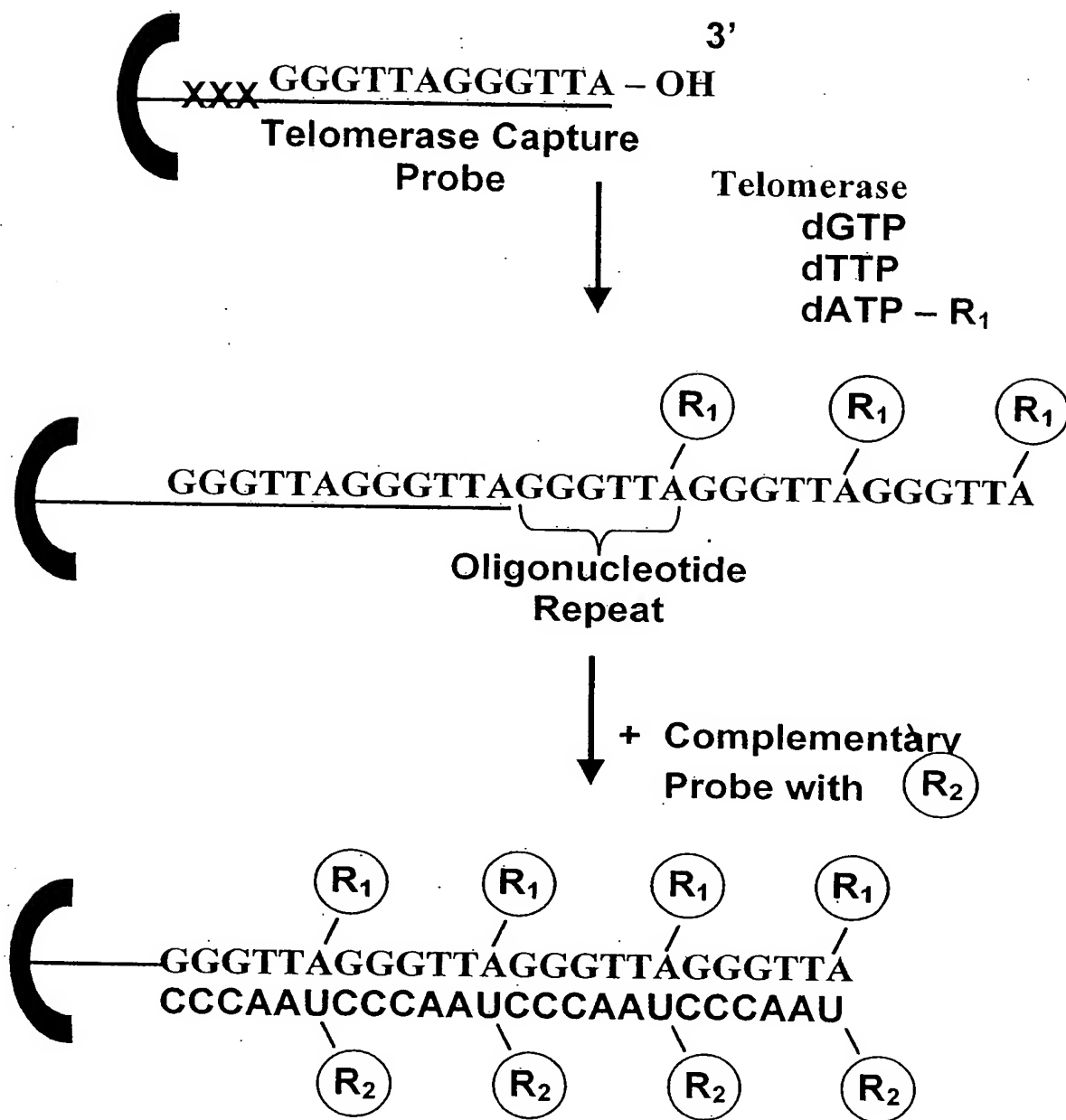


FIGURE 25

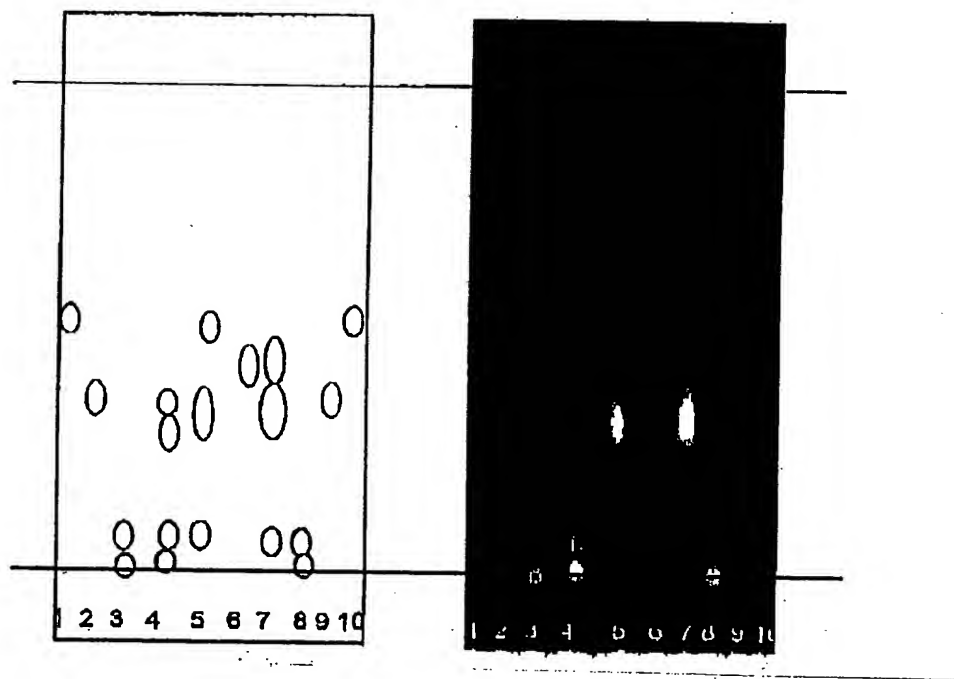


FIGURE 26

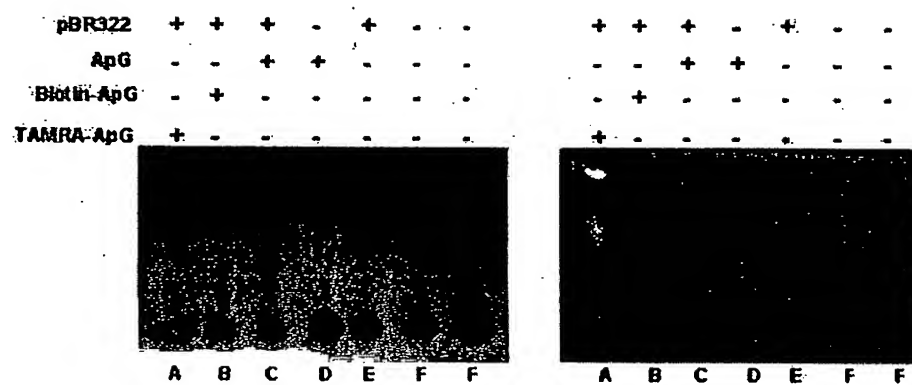


FIGURE 27

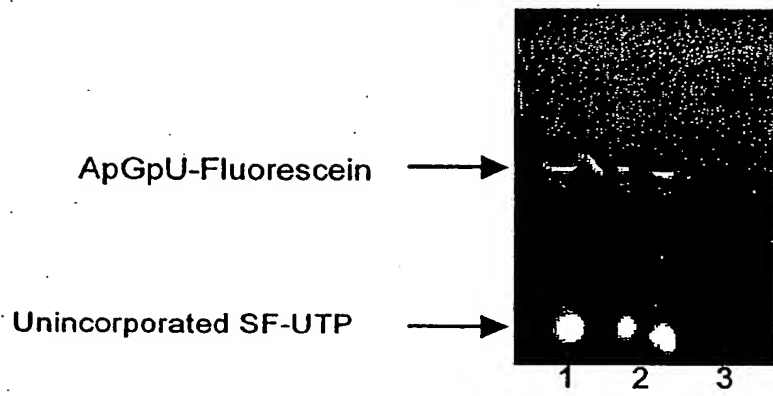


FIGURE 28

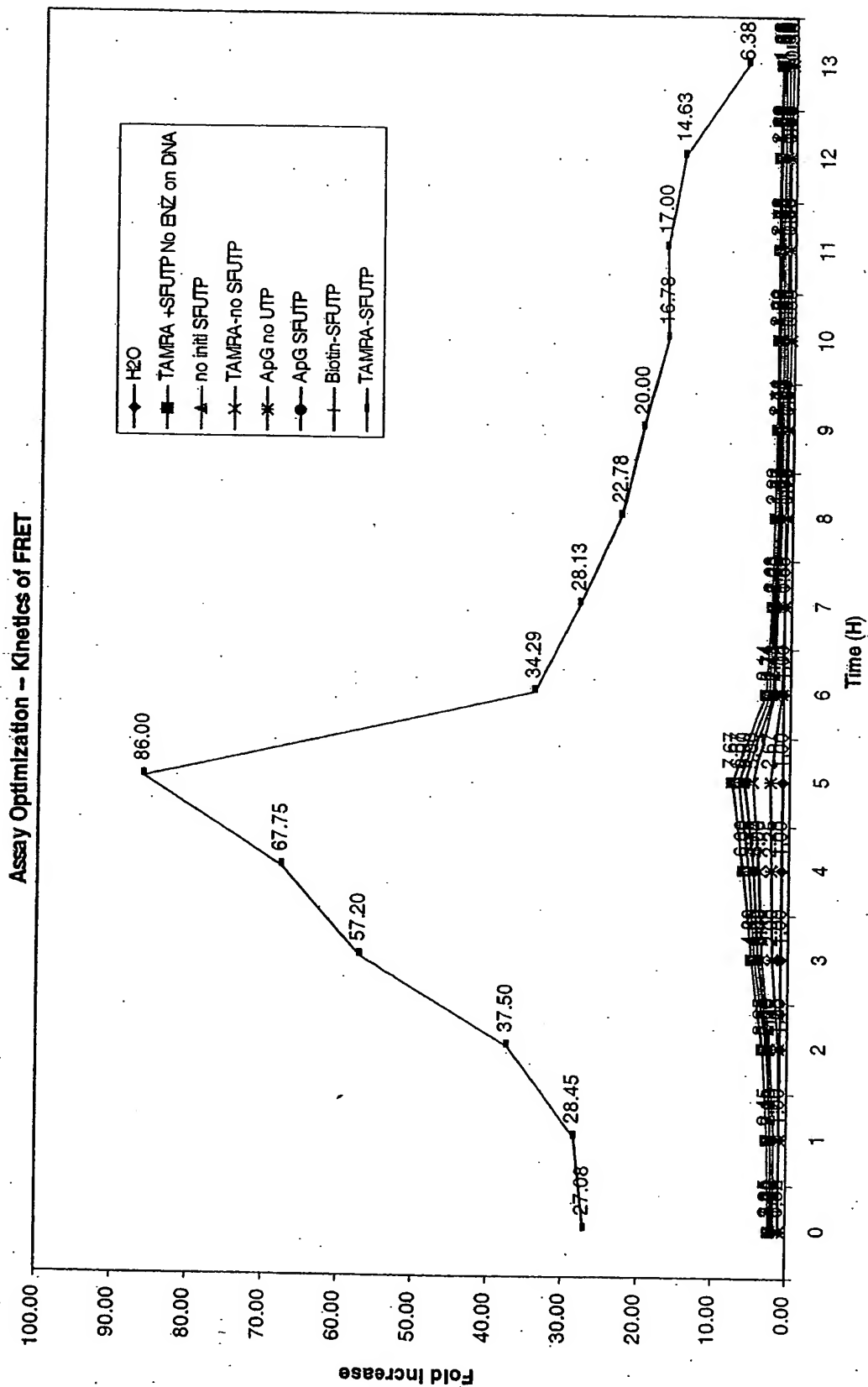


FIGURE 29A

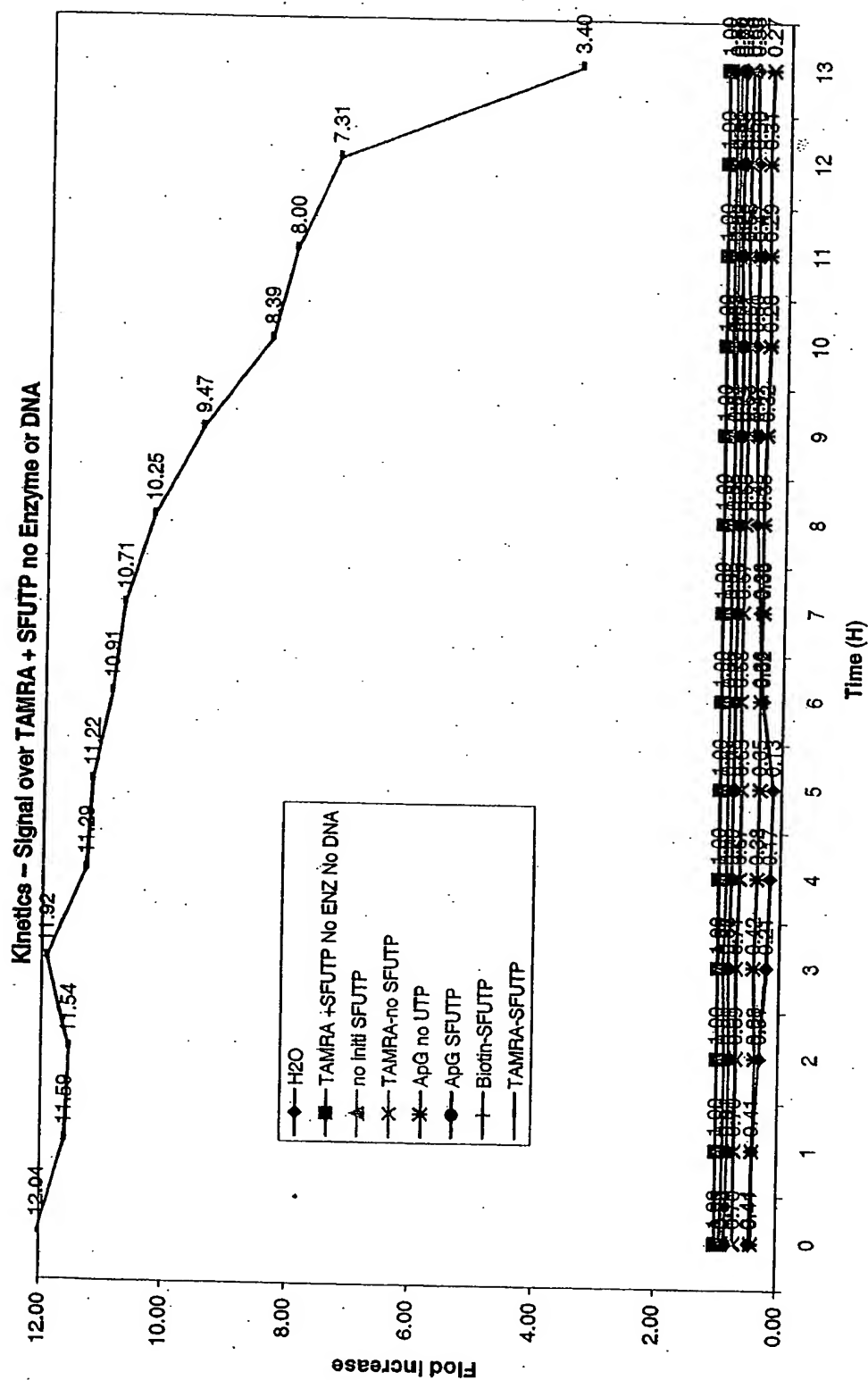


FIGURE 29B

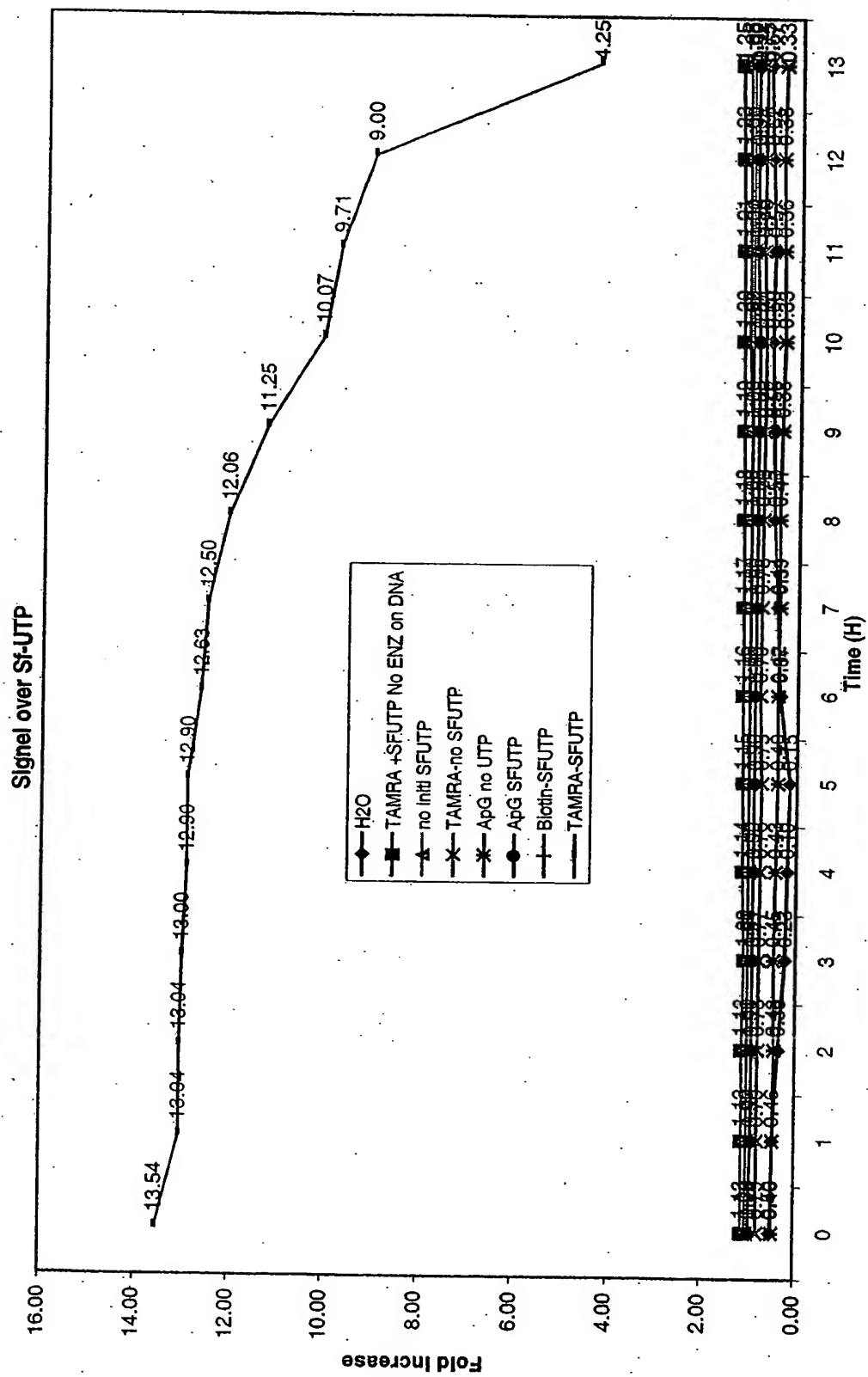


FIGURE 29C





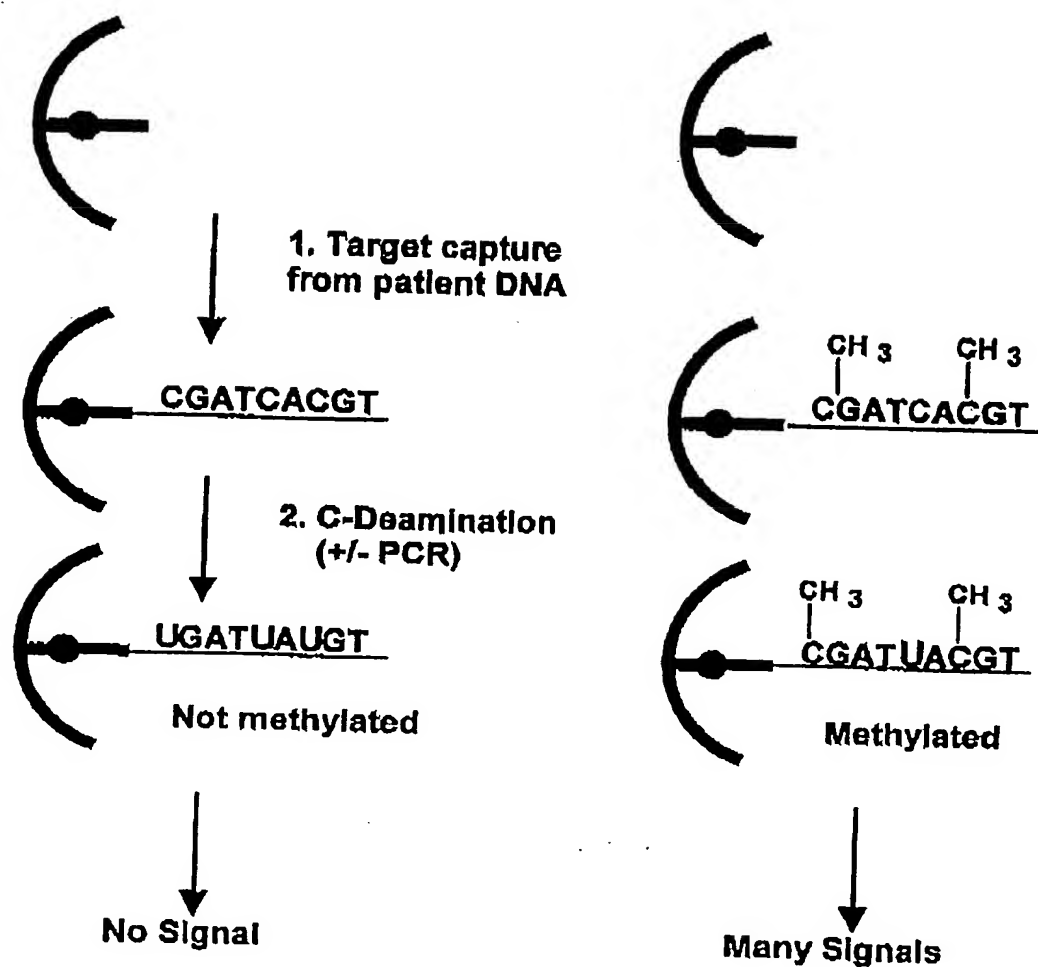


FIGURE 31